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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,282	06/26/2003	Shiro Kawashima	WATK:241B	3309

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STEPTOE & JOHNSON LLP
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WASHINGTON, DC 20036

EXAMINER

KOEHLER, ROBERT R

ART UNIT PAPER NUMBER

1775

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**SUPPLEMENTAL
Notice of Allowability**

Application No.

10/606,282

Examiner

Robert R. Koehler

Applicant(s)

KAWASHIMA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Information Disclosure Statement filed on September 21, 2005.
2. ☒ The allowed claim(s) is/are 1,2,5-7,9-11,13,15-18,21,22 and 25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 09212005
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Robert R. Koehler

**ROBERT R. KOEHLER
PRIMARY EXAMINER**

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DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on September 21, 2005 was filed after the mailing date of the Notice of Allowability on September 7, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

Claims 1, 2, 5 to 7, 9 to 11, 13, 15 to 18, 21, 22, and 25 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art search has not produced any references which teach, suggest, or disclose applicants' amended claims to a hollow casting in which continuous dimples, each of which has a diameter of 10 to 2500 μm and a depth of 50 μm or less, are formed on an internal surface of the hollow casting and the entire continuous dimples and their edges are formed to be smooth. Also, the prior art does not teach or reasonably suggest a surface treatment method for treating an internal surface of a hollow casting that includes the steps of placing a surface treatment material containing at least a polyhedral or spherical material having a diameter of 5 mm or more inside the hollow casting and subsequently colliding the surface treatment material with the internal surface to cause the surface treatment material to form continuous dimples, each of which has a diameter of 10 to 2500 μm and a depth of 50 μm or less on the internal surface of the hollow casting. European Patent Application no. EP 1 065 345 A2 (EP '345) teaches a metal article such as a turbine component having depressions configured in a "moon-crater"-like structure on the surface of an overlay coating. According to EP '345, the overlay coating can be formed on the metal substrate by various techniques; see line 19 in column 9 to line 57 in column 10. EP '345 does not teach or reasonably suggest that the "moon-crater"-like depressions are formed directly on the surface of the metal substrate as claimed by the applicants, and EP '345 does not teach or reasonably

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suggest that any surface depressions shall be continuous dimples with their edges being formed to be smooth as claimed by the applicants. In contrast to the applicants' claimed surface structure of "continuous dimples," EP '345 teaches only well-defined "moon-crater"-like depressions having distinct ridges around the depressions. Furthermore, the "moon-crater"-like depressions taught by EP '345 have a greater depth (about 75 microns to about 2000 microns; see lines 6 to 17 in column 13) compared to the continuous dimples claimed by the applicants.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Robert Koehler whose telephone number is (571) 272-1536. The Examiner can normally be reached on Tuesday to Friday from 9:30 AM to 7:00 PM. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on (571) 272-1535. The official Fax No. is (571) 273-8300, and the After-Final Fax No. is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ROBERT R. KOEHLER
PRIMARY EXAMINER

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October 31, 2005